PROGRAM CODE

```c
#include<stdio.h>
void main ()
{
  int buffer[10], bufsize = 5, in, out, pro, cons, choice;
  in = out = 0;
  do
    {
      printf ("\n1)Produce\t2)Consume\t3)Exit\n");
      printf ("Choice ? [1/2/3] >>> ");
      scanf ("%d", &choice);
      switch (choice)
          {
          case 1:
            if ((in + 1) % bufsize == out)
              printf ("Buffer is Full\n");
            else
              {
                printf ("Enter Production Value = ");
                scanf ("%d", &pro);
                buffer[in] = pro;
                in = (in + 1) % bufsize;
              }
            break;
          case 2:
            if (in == out)
              printf ("Buffer is Empty\n");
            else
              {
                cons = buffer[out];
                printf ("\nConsumed Product = %d\n", cons);
                out = (out + 1) % bufsize;
              }
          }
    }
  while (choice != 3);
}
```

OUTPUT


```
administrator@administrator-hcl-desktop:~/Desktop/gopikrishna$ gcc proconp.c
administrator@administrator-hcl-desktop:~/Desktop/gopikrishna$ ./a.out

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 1
Enter Production Value = 50

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 1
Enter Production Value = 100

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 1
Enter Production Value = 150

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 1
Enter Production Value = 200

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 1
Buffer is Full
```

```
Buffer is Full

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 2

Consumed Product = 50

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 2

Consumed Product = 100

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 2

Consumed Product = 150

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 2

Consumed Product = 200

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 2
Buffer is Empty

1)Produce       2)Consume       3)Exit
Choice ? [1/2/3] >>> 3
administrator@administrator-hcl-desktop:~/Desktop/gopikrishna$
```